To: Denton, Debra[Denton.Debra@epa.gov]; Stuber, Robyn[Stuber.Robyn@epa.gov]
Cc: Wagner, Amy[Wagner.Amy@epa.gov]; Husby, Peter[Husby.Peter@epa.gov]
From: Black, Ned
Sent: Sat 5/23/2015 6:10:15 PM
Subject: RE: RE: Information on toxicity testing

Debra,

Thanks for your reply and thoughts. And thanks for cc:ing Amy; I meant to cc Amy and Peter.

Just got calls from OSPR and Harry Allen; they want me to head down today to join the Environmental Unit and I will wrangle the bioassay samples from there.

Amy & Peter may not be checking email over the weekend. I'll text them too.

Cheers'
ned

ned black, ph.d.
us epa r9
regional cercla ecologist
415-972-3055

-----Original Message-----
From: Denton, Debra
Sent: Saturday, May 23, 2015 8:54 AM
To: Black, Ned; Stuber, Robyn
Cc: Wagner, Amy
Subject: RE: RE: Information on toxicity testing

Hi Ned

Yes, any of the larval development (abalone, urchins) or the urchin fertilization tests would be good tests to be conducted. Yes, the urchin fertilization is a shorter time endpoint, but you still have the time involved to set up and make the endpoint observations. It is still paramount to conduct tests with longer biological endpoints. I am thinking we should consider another indicator species that would be sensitive to petroleum contaminants too. I would like to hear from Amy on this point. Even, if we conduct a longer test duration test like the fish 7 day survival and growth, it still would be important to evaluate whether there are adverse effect to fish in the system. We can measure lethality on a daily basis and observe for behavior visual effects (not official endpoints) of the test but with this type of acute spill, it would be important to make those observations. The community of people will be interested in fish observed effects.

Are you looking to collect samples this weekend and start the test next week bc of the spill? You may wish to consider collecting additional water - if any TIE manipulations would be considered or chemical analysis would be considered.

Let me know if you need anything else.

PEACE = Purposefully Express Appreciation and Compassion for Everyone Debra
Disclaimer: This message was written with voice activated software. It may contain errors. Some of them

might be interesting. Observe the context and the meaning will, hopefully, be obvious.

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-----Original Message-----
From: Black, Ned
Sent: Friday, May 22, 2015 2:35 PM
To: Denton, Debra; Stuber, Robyn
Subject: FW: RE: Information on toxicity testing

Howdy Debra and Robyn,

I've been working with the Emergency Response folks on the Refugio Beach oil spill response and was asked for monitoring suggestions. Since I know Amy Wagner out at the R9 Lab does a lot of purple sea urchin and red abalone bioassays, and those critters are native to the California coast, I suggested we might get water samples offshore from the beach. This came up in a briefing for Alexis Strauss this morning and she asked me to run the idea past the two of you.

Attached are the SOPs Amy wrote for these bioassays. If and when we do this, either one of our contractors or maybe I will collect the water as described in the SOPs and transport it immediately to the lab while holding the temperature at 4 C. Amy or Peter Husby will then run the bioassays within the 36 hour hold time. My intention for the data is to both document and map impacts and to see if this protocol could be used in the future to help guide response efforts. I'm particularly interested in the urchin assay because the results come quickly.

Let me know if you have any thoughts or would like to be further involved. At this point, the effort down at Refugio is too focused on immediate response to divert a boat for this sampling, but that will change in a couple days. Regardless, I'm not thinking we could use the data to guide this response so much as I'd like to evaluate this sort of sampling and analysis for future responses.

Cheers,

ned

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regional cercla ecologist
415-972-3055

Please be advised I currently have limited access to email when I am not in the office (e.g., on travel), therefore please be patient with any communication delays.

-----Original Message-----
From: Husby, Peter
Sent: Wednesday, May 20, 2015 4:01 PM
To: Black, Ned; Wagner, Amy

Subject: RE: RE: Information on toxicity testing

Ned,

Here are the two SOPs. Section 5 is on Sample handling & preservation. We will need more than 40 mL samples to test at ambient levels. The urchin test uses about 30 mL per concentration (6 reps of 5 mL each). Assuming this is seawater, we would want at least 4 VOA vials per sample (or a larger amber glass bottle)(assuming a 0.5 dilution factor and testing 100% and down). For the abalone, we would need a couple of liters, assuming (5 reps of 200mL each) and a similar dilution series. I would use 1 liter amber glass for those. If the water is not 32-36 ppt seawater, we will have to salt up the samples, which we can do but it is a pain. If the samples are at all fresh we should use a different species.

Peter
Peter Husby
Field & Biology Team Leader
USEPA Region IX Laboratory
1337 S. 46th St.; Bldg. 201
Richmond, CA 94804
Phone: 510 412-2331
FAX: 510 412-2302
Email: husby.peter@epa.gov

-----Original Message-----
From: Black, Ned
Sent: Wednesday, May 20, 2015 3:41 PM
To: Husby, Peter; Wagner, Amy
Subject: FYI: RE: Information on toxicity testing from Deepwater

Yo dude,

Can you send the SOPs for urchins and abalone tests. Particularly anything on sample collection and holding.

Thnx,

ned

ned black, ph.d.
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regional cercla ecologist
415-972-3055

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-----Original Message-----
From: Allen, HarryL
Sent: Wednesday, May 20, 2015 3:38 PM
To: Black, Ned
Cc: Moxley, Bret; Waldon, MARGARET; Guria, Peter; Stroud, Fred
Subject: Re: Information on toxicity testing from Deepwater

This is a GREAT suggestion. Thanks Ned.

Also, on the inland piece/inland wash to the culvert, Maggie Waldon is heading out there now and should be able to debrief you around 4 if you like. She said you could call her. 415-940-1109.

Thanks again!

Sent from my iPhone

> On May 20, 2015, at 2:08 PM, "Black, Ned" <Black.Ned@epa.gov> wrote:
>
> Harry et al.,
>
> This is just a thought. If you want to screen seawater samples for toxicity, the R9 lab regularly runs tox tests on purple sea urchins and red abalone. Both critters are native to the California coast; I think that one criticism of the rotifer work during Deepwater was the use of non-native species. I checked with Peter Husby at the lab and they have a good stock of urchins and could conceivably start running samples in short order. They have a limited supply of abalone but would order more if necessary. If you want more info on these tests I'll get the SOPs from Peter.
>
> I've opened up the two NOAA data sites which came out of Deepwater and will start looking for sampling strategies. My guess is the NOAA folks (probably Jordan Stout) are ahead of us on that.
>
> ned
>
> ned black, ph.d.
> us epa r9
> regional cercla ecologist
> 415-972-3055
>
> Please be advised I currently have limited access to email when I am not in the office (e.g., on travel), therefore please be patient with any communication delays.
>
> -----Original Message-----
> From: Allen, HarryL
> Sent: Wednesday, May 20, 2015 10:36 AM
> To: Black, Ned; Moxley, Bret; Waldon, MARGARET; Guria, Peter; Stroud, Fred
> Subject: Information on toxicity testing from Deepwater
>
> Hey Ned.
> Now that you'll be here I wonder if you could look into this for us. After Deepwater NOAA created a website as a repository for all the information on tox and environmental data. I wonder if you remember that and now how to access it. If like to put over some of that to inform a nearshore sampling strategy. Objective would be to ascertain PAH and BTEX affects on aquatic life. I understand rotifer tests could be limited. Maybe PAH water/sed analysis or maybe another surrogate method would be worthwhile. To early for this yet but I want to start thinking about it.
>
> Sent from my iPhone